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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,251	01/14/2002	Collin E. Thomas	TEXG:003USD1	6847

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EXAMINER

WEBER, JON P

ART UNIT PAPER NUMBER

1651

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/047,251	<b>Applicant(s)</b> THOMAS ET AL.	
	<b>Examiner</b> Jon P Weber, Ph.D.	<b>Art Unit</b> 1651	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20,21 and 25-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 20,21 and 25-51 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

***Status of the Claims***

Claims 20-21 and 25-51 have been presented for examination.

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 20-21, 26, 28-31, 32 and 51, drawn to a method of increasing drug resistance with compound I, classified in class 514, subclass 365, for example.
- II. Claims 20-21, 26, 28-31, 33 and 51, drawn to a method of increasing drug resistance with compound II, classified in class 514, subclass 517, for example.
- III. Claims 20-21, 26, 28-31, 34 and 51, drawn to a method of increasing drug resistance with compound III, classified in class 514, subclass 603, for example.
- IV. Claims 20-21, 26, 28-31, 35 and 51, drawn to a method of increasing drug resistance with compound IV, classified in class 514, subclass 476, for example.
- V. Claims 20-21, 26, 28-31, 36 and 51, drawn to a method of increasing drug resistance with compound V, classified in class 514, subclass 359, for example.
- VI. Claims 20-21, 26, 28-31, 37 and 51, drawn to a method of increasing drug resistance with compound VI, classified in class 514, subclass 614, for example.
- VII. Claims 20-21, 26, 28-31, 38 and 51, drawn to a method of increasing drug resistance with compound VII, classified in class 514, subclass 476, for example.
- VIII. Claims 20-21, 26, 28-31, 39 and 51, drawn to a method of increasing drug resistance with compound VIII, classified in class 514, subclass 615, for example.

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- IX. Claims 20-21, 26, 28-31, 40 and 51, drawn to a method of increasing drug resistance with compound IX, classified in class 514, subclass 510, for example.
- X. Claims 20-21, 26, 28-31, 41 and 51, drawn to a method of increasing drug resistance with compound X, classified in class 514, subclass 614, for example.
- XI. Claims 20-21, 26, 28-31, 42 and 51, drawn to a method of increasing drug resistance with compound XI, classified in class 514, subclass 613, for example.
- XII. Claims 20-21, 26, 28-31, 43 and 51, drawn to a method of increasing drug resistance with compound XII, classified in class 514, subclass 555, for example.
- XIII. Claims 20-21, 26, 28-31, 44 and 51, drawn to a method of increasing drug resistance with compound XIII, classified in class 514, subclass 622, for example.
- XIV. Claims 20-21, 26, 28-31, 45 and 51, drawn to a method of increasing drug resistance with compound XIV, classified in class 514, subclass 457, for example.
- XV. Claims 20-21, 26, 28-31, 46 and 51, drawn to a method of increasing drug resistance with compound XV, classified in class 514, subclass 615, for example.
- XVI. Claims 20-21, 26, 28-31, 47 and 51, drawn to a method of increasing drug resistance with compound XVI, classified in class 514, subclass 448, for example.
- XVII. Claims 20-21, 26, 28-31, 48 and 51, drawn to a method of increasing drug resistance with compound XVII, classified in class 514, subclass 365, for example.
- XVIII. Claims 20-21, 26, 28-31, 49 and 51, drawn to a method of increasing drug resistance with compound XVIII, classified in class 514, subclass 518, for example.

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XIX. Claims 20-21, 26, 28-31, 50 and 51, drawn to a method of increasing drug resistance with compound XIX, classified in class 514, subclass 512, for example.

XX. Claims 25 and 27 drawn to a method of increasing drug resistance by a) treating with an ectophosphatase inhibitor and b) down-regulating the ABC transporter, classified in class 514 and/or 424, subclass unknown – no specific compounds or methods set forth.

The inventions are distinct, each from the other because of the following reasons:

Inventions I-XIX and XX are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because drug resistance can be accomplished by developing modified forms of the drugs that are not subject to the effects of the drug resistant process, including but not limited to enzyme inactivation, decreased binding, or increased excretion. The subcombination has separate utility such as reducing drug resistance separately.

Inventions I and II-XIX are each unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to different structures allegedly sharing a functional property but sharing no core chemical structure and therefore not a proper Markush group.

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for any Group is not required for any other Groups, especially in the non-patent literature (a separate structure search would have to be performed on each distinct structure) restriction for examination purposes as indicated is proper.

### *Species*

Claims 20-21 and 25-51 are generic to a plurality of disclosed patentably distinct species comprising:

(a) cell type for the drug resistance - a single cell type: bacteria, yeast, plant, mammal must be elected.

(b) organism for the ABC transporter - single organism (see claim 27)

(c) organism for the ectophosphatase - single organism (claim 26).

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Species (b) only applies to Group XX, whereas a species from (a) and from (c) must be elected if any of the Groups is elected.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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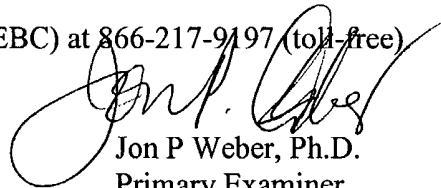
This is a restriction election only.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon P Weber, Ph.D. whose telephone number is 571-272-0925.

The examiner can normally be reached on daily, off 1st Fri, 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

  
Jon P Weber, Ph.D.  
Primary Examiner  
Art Unit 1651

JPW  
29 March 2004